

Fisheries Management Student Activity Book

I. Introduction

Part of the job of the U. S. Government is to ensure that the rights of all of the citizens of the United States are protected. The National Marine Fisheries Service's job is to make sure that people don't catch so many fish that there are not enough fish left to breed and replenish the fish population. If people catch too many fish now, there will not be enough for people to catch in the future. The National Marine Fisheries Service is therefore, in a real sense, a guardian of the future.

Get Info Objectives

1. Explain what fisheries management is.
2. Explain why fisheries management is important.
3. Describe how fish populations are managed.

Gather Data Objectives

1. Determine the year that had the greatest and least fish landings (catches)
2. Describe the pattern of catches over a long period of time.
3. Determine the method of fishing that catches the most fish.

Application Objectives

1. Hypothesize the effects of better fishing methods on the long term landing (number of fish caught).
2. Explain why the commercial fishing license system should be continued.

3. Develop a list of illegal activities that should be reported to the National Marine Fisheries Service.
 - From the main screen, click "Get Info."

II. Get Info

A. Recreational Catch

- Click on the "Recreational Fisheries" site.
- Read the first two paragraphs and the first two lists.

1. Why should the government be concerned with the number of fish people catch?

- Click the "Back" button at the top of the screen in your web browser until you get back to the OAR Fisheries Get Info site.

B. Atlantic Cod Commercial Gear Type and Catch

- Click on the "Gear Type" site.
- Scroll down to the "Species" box on the left side of the page. (NOT the "Species Locator" box in the middle of the page!)
- Delete the text in the box then type "cod, atlantic" in the Species box.
- Scroll down to the "Year Range" boxes.
- Click and hold on the "From" box and select 1990.
- Scroll down to "Gear Type."
- Gear Type should read "all gear individually".
- Scroll down and click the "Submit Query" box.

1. What are the major types of equipment used to catch fish?

2. What are the three best types of equipment used to catch Atlantic Cod?

- Click "Back" to get back to the "Gear Type Search" page.

C. Yellowfin Tuna Commercial Gear Type and Catch

- Scroll down to the "Species" box and type in "tuna, yellowfin".
- Scroll down and click the "Submit Query" box.



1. What type of equipment used caught the most yellowfin tuna in

a) 1990? _____

b) 1991? _____

c) 1992? _____

d) 1993? _____

e) 1994? _____

f) 1995? _____

g) 1996? _____



- Click "Back" until you get back to the OAR Fisheries main screen.



- Click "Gather Data."

III. Gather Data

A. Atlantic Cod Commercial Landings (fish catch)



- Click on the "Commercial Landings" site.
- Scroll down to the "Species" box on the left side of the page. (NOT the "Species Locator" box in the middle of the page!)
- Delete the text in the box then type "cod, atlantic" in the box.
- Scroll down to the "Year Range" boxes.
- Click and hold on the "From" box and select 1990.
- Leave the "To" box at 1996.
- Scroll down to the "Time Frame" box.
- Click and hold on the "Time Frame" box and select "annual".
- Scroll down and click the "Submit Query" box.





1. What is the relationship between the number of fish caught in a year and the number caught the year before?

2. How would you explain this relationship?

- Click "Back" to get back to the "Commercial Landings" site.



B. Red Drum Commercial Landings (fish catch)

- Click on the "Annual Commercial Landings" site.
- Scroll down to the "Species" box on the left side of the page. (NOT the "Species Locator" box!)
- Delete the text in the box then type "drum, red" in the box.
- Scroll down to the "Year Range" boxes.
- Click and hold on the "From" box and select 1981.
- Scroll down and click the "Submit Query" box.



1. What is the trend in number of fish caught each year?



2. Hypothesize why the catch might be so low after 1987.

- Click "Back" until you get back to the OAR Fisheries Gather Data site.
- Click "Forward" at the bottom of the screen.

C. Commercial Regulations

- Click on the "Commercial Regulations" site.
- Scroll down to the Spanish Mackerel section.

1. Is a permit required to catch Spanish Mackerel? _____

2. How big is the largest Mackerel you can keep?

3. What laws apply to gill net fishing for Mackerel?

4. What time of year can you fish for Spanish Mackerel?



5. How much Spanish Mackerel can you catch in a year?



- Click "Back" until you get back to the OAR Fisheries Gather Data site.
- Click "Forward" at the bottom of the screen.
- Click on the "Other Regulations" site.
- Scroll down to the "King and Spanish Mackerel" section on page 2.

6. What business must you have already been in to qualify for a commercial Mackerel permit?

- Click "Back" until you get back to the OAR Fisheries site.

D. Recreational Red Snapper Landings

- Click on the "Red Snapper" site.
- Scroll to the "Year Range" section.
- Click and hold the "From" box then select 1981.
- Scroll to the "State/Area" box.
- Click and hold the "State/Area" box and select "Louisiana".
- Scroll to the "Species" box.
- Click and hold the "Species" box and select "Red Snapper".
- Scroll to the "Fishing Area" box, click and hold it, and select "State Waters".
- Scroll down the page and click on the "Submit Query" box.

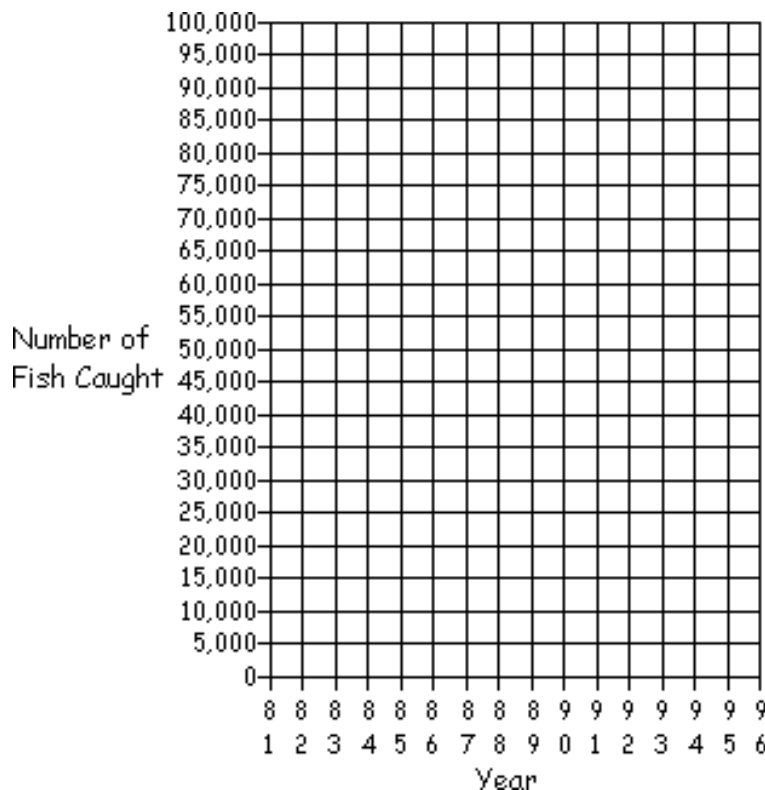
- Scroll down to the bottom of the page that appears and click the "Submit the Query" box.

1. After a few years of catching large amounts of fish, what happens to the number of fish caught per year?

- Click "Back" until you get back to the OAR Fisheries main screen.

E. Graph the Recreational Red Snapper Catch

1. Graph the catch of Red Snapper in the state waters of Louisiana from 1981 to 1996.
- Plot the points of numbers of fish caught each year then draw a line connecting the points.



- Click "Application".

IV. Application

A. Effect of Fishing Methods Improvement



1. What would happen if fishing methods improved but there were no regulations on how many fish could be caught?

2. List any fishing methods or equipment that helps people know where fish are.



B. Commercial (for profit) Fishing Problems

1. Why should the number of commercial fishing licenses be controlled?

C. Recreational Fishing Problems



1. Why should you report the number of fish you catch?

2. How else can you help the National Marine Fisheries Service protect your natural resources?

3. What types of illegal activities should you report to the National Marine Fisheries Service?

- Click "Back" until you get back to the OAR Fisheries main screen.

V. Enrichment Activities

A. Interview

1. Interview commercial fishermen. Ask them about the type of training needed to fish for a living. Ask about problems they've encountered. Find out what the job is like - what good and bad points are there? See if they like their jobs. Ask them how much fish they catch per year and what might influence the catch besides limits imposed by the government.

B. Local Limits

1. Different areas allow different amounts of fish to be caught. Find out the catch limits in your area for your favorite types of fish.

C. Diet

1. List for a week everything that you eat that comes from the water.



D. Research other species that are harvested besides fish

1. crabs
2. shrimp
3. clams
4. oysters
5. whales



E. Plan for the future

1. Develop a plan to conserve fish so they can always be harvested. What limits would you put on commercial fishers and recreational fishers?



F. Related Web Sites

1. National Marine Fisheries Service Home Page
<http://kingfish.ssp.nmfs.gov/>
2. Fisheries Statistics and Economic Division
- search page for fish landing data
<http://remora.ssp.nmfs.gov/>
3. Local, Accepted Common, and Scientific Names of Fish
http://remora.ssp.nmfs.gov/recreational/survey/local_names.html
4. A Brief History of Ground Fishing
<http://www.noaa.gov/nmfs/groundfish/grndfsh1.html>
5. NOAA Sustainable Fisheries Regional Projects
<http://www.noaa.gov/nmfs/sustain.html>
- Click on the US map to get to the projects in your area.
6. Should captive whales and dolphins be set free?
<http://www.nmfs.gov/tmcintyr/faq.html>